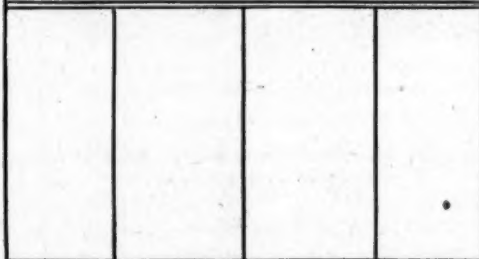


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J. WESLEY ALLISON

One of Chicago's Energetic Business Men and President of the Woods  
Motor Vehicle Company



# JUSTICE FOR CHICAGO

**Manufacturers' Association Reverses Its Action and All Big Makers Will Now Exhibit at the Coming Show.**

**Energetic Action By Management was Backed By Influential Makers and the Daily and Automobile Press.**

**The Association's Committee Proved a Desire to Act Fairly But Had Been Misled Concerning the Sentiments of the Trade.**

has rescinded the antagonistic resolution reported two weeks ago and has substituted therefor one which assures the success of the enterprise and the attendance of a majority of the leaders in its membership.

The history of the case is simple. About a month ago the committee adopted a resolution advising members not to participate in any show which had not received the sanction of the association. The Chicago management, thereupon, made formal application for a sanction, and in support of its request furnished many good reasons why such sanction should be granted.

This application was considered at a meeting at which only five members of the executive committee were present, and the result was a resolution advising members that it was "the sentiment of the committee that no exhibit be made at Chicago."

In view of all the facts in the case the action seemed to the management to be unjust, and an application was therefore filed to have a special meeting called at which a representative of the show might be present with a view to securing more favorable action.

During the early days of last week Messrs C. J. Field,

**C**HICAGO'S "I will" is once more proudly triumphant. The executive committee of the National Association of Automobile Manufacturers has recognized the claims put forward on behalf of the Chicago exhibition. It

H. F. Bradbury, J. M. Hill and Percy Owen, who were present at the meeting above referred to, were seen, and one and all declared that they had no desire to do an injustice to Chicago. Thanks to these gentlemen and to Secretary Wells, a special meeting was called for Friday last, at which time nine members of the committee were in attendance or were represented.

The secretary had before him at that time unquestionable evidence that a great number of members of the association, and a still greater number of concerns which are not yet members, were desirous that no action calculated to injure the Chicago show should be taken by the association.

The matter was fully discussed and the following resolution was drawn, referred to the Chicago representative who was present, pronounced entirely satisfactory, so far as Chicago was concerned, and adopted by unanimous vote:

#### **An Equitable Arrangement**

Whereas, Certain shows seem to have been projected and both labor and money expended thereon, prior to the organization of the National Association of Automobile Manufacturers, and,

Whereas, Such projectors feel that an injustice is being done them by the recent action of this Executive Committee; therefore,

Resolved, That the action had by this committee on January 3rd be and the same is hereby rescinded, and in lieu thereof the following resolution be and is hereby adopted:

Resolved, That it is the sense of the Executive Committee that the National Association of Automobile Manufacturers shall occupy an absolutely neutral position regarding the holding of any show of which definite announcement had been made and on which money and labor had been expended prior to November 10th, 1900, and that as to all other shows (except an annual show in New York and one in Chicago, both to be held under the auspices of the recognized automobile clubs of the respective cities, and the Pan American Exhibition) this committee deprecate the same and will urge its members not to exhibit.

#### **Many Reasons for Favoring the Show**

The grounds on which Chicago asked for favorable consideration were as follows:

The show was announced in July of

last year, four months before the association was formed.

Printed matter was issued and advertising matter was at the Madison Square Garden show, and actually in the room at the time the association was organized.

At the meeting a representative of the Motor Age asked for the association's co-operation and that a committee be appointed for that purpose.

It was the only show which had applied to the association for sanction.

No show had been held in the west and no other was contemplated, while eastern makers and dealers had been given abundant opportunity to exhibit and inspect all classes of vehicles.

The show was to be held at the opening of the new season, and therefore at a time when it could hardly fail to be advantageous to the trade.

The co-operation of the press had been secured and the railroad associations had already granted reduced rates.

The management was competent as had been shown at previous exhibitions, and was possessed of facilities which no other promoters could approach.

A large sum of money had been spent in preparation, one-half of the space had already been sold.

No attempt had been made to interfere with the progress of other shows, every one of which had been announced since the formation of the association.

#### **The Trade Wants It**

It has already been said that the secretary had received abundant evidence of the desires of the trade and other persons interested.

J. Wesley Allison, president of the Woods Motor Vehicle Co., and one of the vice-presidents of the association, wired that he strongly recommended that the show be sanctioned. George H. Day, president of the Electric Vehicle Co., made a similar statement to the secretary. Writing to the Motor Age in reference to the matter Mr. Allison said: "I have expressed myself in the most forcible manner to the executive committee, that I was heartily in favor of and would like to support your automobile show to be held in March."



The opinions of other people whose influence was brought to bear are here quoted.

**E. R. Thomas Motor Co.**—Many of the manufacturers applied for space before the formation of the association, and for that reason are committed thereto and arranged to meet many of their agents. We respectfully urge that it would complicate matters to prohibit the show, and that sanction should be given. This letter is unsolicited so far as the Motor Age is concerned.

#### Management Known to Be Capable

**National Automobile and Electric Co.**—We are strongly inclined to the belief that a spring show held in Chicago would be beneficial to the trade as a whole. We sincerely trust that the organization will give sanction. It should be borne in mind that the show was planned before any organization was attempted, hence the interest of the show should not be prejudiced by the fact that a sanction was not asked for in the beginning. We know the manager and testify to his ability in managing affairs of this kind.

**Waltham Manufacturing Co.**—We are well acquainted with the promoters of the Chicago Automobile show and believe them to be capable of conducting it in a manner which will be beneficial to the industry. Inasmuch as it was announced before the manufacturers' association was organized, we believe that it would be only fair to rescind a like resolution and grant a sanction.

**Munger Vehicle Tire Co.**—That we are in accord with the show is evident by the fact of our having taken space. Our experience at shows given under the same auspices was such as to convince us of the management's ability to make this coming show a good success, and we believe it should be accorded the support of the entire trade. We trust the national association will reverse its former action.

**Sipe & Sigler.**—In view of the several pertinent reasons set forth by the Motor Age, we think it would be fair to grant the sanction asked for unless there is some greater reason to the contrary than we are aware of. We hope to see

the show receive the sanction of the association, together with the assurance that the same shall be the only Chicago show receiving sanction during the present year.

**Ralph Temple.**—The show received our hearty endorsement, and I sincerely hope that nothing will stand in the way of giving it your hearty endorsement. I have taken part in shows in this country and Europe for twelve years, and know that those held under the Chicago management were on a par with any I have ever seen in this or other countries. The Motor Age people know how to run a show. We have taken space and feel that the exhibition will be run in a strictly business-like way.

**Moffett Vehicle Bearing Co.**—Having been allotted space for the exhibit at this meeting and appreciating as we do the desirability of the sanction of this show by your association, we want to heartily endorse the application. These people showed clearly their capabilities for handling a show to the entire satisfaction of manufacturers and the public through their connection with bicycle exhibits in our city. We believe they can do as well or better than was done at that time in their present venture, and if so all parties must certainly be satisfied.

#### Favorable Opinions from all Sides

Comparatively few of the letters addressed to the association are available for use here, but the tone of all of them was similar to those quoted. Among the houses which asked the association to take favorable action were the following.

- H. F. Borbein & Co., St. Louis.
- Remington Automobile Co., Ilion, N. Y.
- Boston Motor Carriage Co., Boston, Mass.
- Puritan Manufacturing Co., New York.
- New York Motor Vehicle Co., New York.
- Kokomo Rubber Co., Kokomo, Ind.
- John R. Keim, Buffalo, N. Y.
- Cleveland Automobile and Supply Co., Cleveland, O.
- Veeder Manufacturing Co., Hartford, Conn.
- Pratt Brothers & Co., Chicago.

Rochester Cycle & Automobile Co.,  
Rochester.

Sterling Automobile Co., Boston, Mass.

A. H. Funke, New York.

American Pneumatic Valve Co., Buffalo.

Badger Brass Co., Kenosha, Wis.

Fisk Rubber Co., Springfield, Mass.

United States Automobile Co., Attleboro, Mass.

Snell Cycle Fittings Co., Toledo, O.

20th Century Manufacturing Co., New York.

Ellis & Flemming Manufacturing Co., Brooklyn.

Frank Mossberg Co., Attleboro, Mass.

Coe Manufacturing Co., New York.

Grout Brothers, Orange, Mass.

New Departure Bell Co., Bristol, Conn.

H. & F. Mesinger Mfg. Co., New York.

Regas Vehicle Co., Rochester.

Bridgeport Machine & Motor Co., Bridgeport, Conn.

C. J. Downing, New York.

Joseph Dixon Crucible Co., Jersey City.

P. A. Frasse & Co., New York.

Empire State Automobile Co., Rochester.

Fanning Manufacturing Co., Chicago.

Baldwin Chain Co., Worcester, Mass.

Atlantic Rubber Co., New York.

Warwick Cycle and Automobile Co., Springfield, Mass.

#### Chicago Dailies Indorse It

Perhaps one of the most convincing arguments in favor of the show was furnished by the Chicago daily newspapers. On Friday morning the secretary of the association received the following telegram:

"We, the undersigned, believe that the proposed automobile show to be held in Chicago in March is a good thing, and should receive a sanction from your honorable body. The promoters have always been successful in promoting cycle shows, and we believe that they will do as well with the exhibition they now have in mind as they did with the cycle shows."

This telegram was signed by H. L. Bird, city editor of the Daily News; E. A. Smith, of the Chronicle; M. A.

Cresap, of the Times-Herald; E. S. Sheridan, of the Tribune; C. G. Sinsabaugh, of the News, and E. G. Westlake, of the Evening Post. It was accepted by members of the committee as conclusive evidence of the standing of the promoters in their own city. It was supplemented by letters from A. G. Batchelder and G. E. Stackhouse, representing respectively the New York Journal and the New York Tribune, and from Joseph Goodman, proprietor of the Motor World. The latter was of considerable importance in view of the statements made by enemies of the show that the automobile press would not look with favor on an exhibition promoted by one of their number.

#### Novel Features to Be Introduced

The action of the executive committee removes the last obstacle to the success of the Chicago show. The space, already taken in great part, will be filled with little delay. The management will continue to seek the co-operation of the clubs and persons interested in the industry and sport and has now in contemplation a number of features which have not been introduced at previous shows. It is not unlikely that a prominent member of the Automobile Club of America will be asked to arrange and take charge of the track events which will form an interesting part of the exhibition.

An inventive genius is now at work on machinery which will permit races to be held. It will be something on the order of the device in the horse racing scenes sometimes introduced on the stage, the speed, however, being recorded on immense dials. The vehicles will be stationary or practically so, and there will be less danger to the operators than there would be in a contest on an open track.

#### Dealers Will Be on Deck

Illustrated lectures are a feature contemplated by the management. Western people have not been furnished as full opportunity to learn the ins and outs of the operation of the various forms of vehicles as those in the east, and it is therefore intended, if sufficient space can be found available, to intro-

duce this educational feature referred to and to secure the best talent available for the purpose.

Previous shows have depended almost entirely on the general public to make

them profitable to the exhibitors. The Chicago management, however, will cater largely to dealers, and will lose no opportunity to place them in touch with the makers.



## FRENCH LEARNING TO ACCEPT AMERICAN ELECTRICS

**T**HAT America leads the world in the production of electric carriages goes without dispute. That America will before long supply the continental European market with the majority of its electrics is probable. That France and other countries which have not recognized the electric with the cordiality extended it here and in England, are gradually accepting it upon its merits for city use is being daily demonstrated. That the antagonism expressed against the electric in France is due more to French incapability to build electrics equal in efficiency to those made in America than to any inherent quality of the electric vehicle, is apparent to all who look closely into the matter.

The Frenchmen can build gasoline carriages equal, possibly, to any in the world. If their exalted position in this branch of the art is to be lessened by encroachments of foreign electrics, followed by foreign rigs of other motive power, it is natural that the tradesmen of France should try to stick close to the kind of carriage they know best how to manufacture.

In the face of widening public favor for electric carriages of omnibus, vic-

toria and brougham patterns, some of the French automobile journals have with ignorance sublime in their transparent bigotry, started to deride the electric carriage. A sample of such erroneous maneuvers is furnished by the following excerpt, which in the most muddled fashion imaginable purports to be a French view of the status of electric carriages in Europe:

"The present state of the electrical automobile industry is rather precarious; everywhere it seems in a state of halt, of slowing up, if not more than that. Where is the frenzy of the first hours, when all inventors, engineers and makers produced new types which were to revolutionize the world? We are compelled to ask ourselves where we are going, after having gone so far.

"But in our country we cannot wait; we start a thing and go ahead at full speed and, as in paced bicycle race, after the first mile, ridden half-crazy, 'we are gone.' During that time our good friends, calm, quiet, look at us, laugh, and—take profit of our haste to start new games. It will be with the electrical automobile as it has been with the accumulator, with the electrical industry in general. The exposition of 1900 has



shown us how the Germans understand the industry and in which way they practice it, develop it and give it a remarkable extension.

"Instead of being satisfied to ask from the electromobile what it is susceptible to give (or render), we want that it may give us long courses, and thus what do we do? We take ultra-light accumulator batteries, which, under a light load, furnish a large number of watt-hours. But after a certain number of hours only the cells and the frame which supported the active material of the battery remain; as to the active material, it is at the bottom of the cells. The owner of the electromobile, who must be quite rich, as he has paid quite a high price for his vehicle, will pay for the repairs once or twice, but soon will have had enough of it, especially as the dealer is somewhat stiff in charges for the repairing. Finally he will sell his vehicle, telling to everybody that he never saw anything as expensive. Not only the battery, but the tires and mechanical parts are counted in on the high repair prices.

"In Germany, on the contrary, there is a tendency in manufacture toward average weight, if not heavy weight, electrical automobiles; toward using substantial, strong and heavy accumulators. It is there, in the making of the accumulators, that lies the sole way of solving the problem."

A far more intelligent view of the electric situation in Paris is presented by Hart O. Berg, who profitably manages the Paris departments of the Electric Vehicle Co. The experience of this company in France and the development of the electric carriage usage as noticed by Mr. Berg throws a much different and fairer light upon the subject than that cast by the intolerant French journal. He writes for the *Electrical Review* upon the topic of American vehicles (both electric and gasoline) in France, as follows:

"The high place which the petroleum carriage has taken in the automobiling field of France now shows some outward sign of being hard pressed by its more gentle and quite offenseless contemporary, the electric carriage.

"There has been a big fight on in the trade against electricity, as few people in France seem to be prepared to spend the necessary amount of money to establish central stations, without which the difficulties arising in the development of an entirely new means of propulsion were such as to frighten prospective buyers.

"During the last year several charging stations, if they may be called such, have been established in the outskirts of Paris, but they are so far removed from the residential centers that good service was not easily obtained. The representatives of the Electric Vehicle Co. established a charging station which in every sense of the world can be called a central station. This is situated at 54 Avenue Montaigne, in the very heart of Paris. This station was established not only to take charge of the already large number of Columbia automobiles running in Paris, but was equipped to properly charge and look after all types of electrically propelled vehicles. There is ample room in this station for from fifty to sixty carriages, and at the present time the stabling and charging facilities are utilized to their limit. In fact, it has become necessary to establish a second station, and ground for that purpose has already been acquired near the Arch de Triomphe. This second station will be large enough to accommodate 150 carriages, besides which a large space has been set apart for battery care, as it has been the object of the company in Paris to pay special attention to batteries, thereby getting the very best efficiency.

"The company does not do any renting business, all the carriages kept in their stations being owned by individuals. They are stabled, charged and kept in repair at a very nominal cost; in fact, at a price at which it would be impossible to keep horses and carriages, and it is needless to say that the service is giving every satisfaction. The growing popularity of electrically propelled vehicles in Paris is somewhat astonishing to petroleum enthusiasts, and many of the most prominent petroleum carriage owners have one, two or three



electrically propelled carriages as well.

"One of the most prominent men in Paris, who has a magnificent chateau some thirty miles from that metropolis, has four electric vehicles always in commission, and has even gone so far as to sell his petroleum carriages, claiming that the electric vehicles are entirely devoid of the many troubles he has had with those driven by petroleum. The gentleman in question has a large ten-seated omnibus, a victoria, and a four-seated phaeton, besides which he has a wagon, used by his guards at his shooting boxes, finding that he can save quite a number of guards, by being able to send them from one place to another quickly and surely.

"The great demand in France to-day is for broughams and victorias driven by men on the box. The average French automobile owner does not care to drive himself through the streets of Paris at the risk of being crushed by malicious omnibus drivers, and with no means of resenting the insulting threats of the ordinary Paris cabby. In other words, electrically propelled broughams for winter and victorias for nine months of the year are what is being demanded by Parisians to-day.

"The petroleum voiturette is becoming more and more popular, and small vehicles to hold two or four persons and weighing from 900 to 1,200 pounds are and will continue to be in increasing

demand. These little voiturettes are easily handled and are bound to become more popular every year for people living but a short way out of town. The speeds vary from that of a walk to thirty miles per hour, and they are so light and easily handled that accidents are more than rare. Besides this they are very cheap to run, and where petroleum costs 12 cents a quart, this item is very appreciable.

"The petroleum voiturette is now attaining its most simple expression, the parts being reduced to a very few in number and the first complications being rapidly eliminated by a much greater knowledge of the art. In a short time every person in Paris of any means whatever will be the owner of at least an electric brougham, a victoria and a small petroleum voiturette. The number of these three types of carriages now circulating in the larger cities of Europe seems to astonish the traveling American, and, like in all development of this kind, the writer is glad to see that the most rapid progress is coming from the United States. It has been a long time getting there, but from present indications it is easy to believe that not only, as is actually the case, will American electric vehicles be superior to those built in Europe, but American petroleum voiturettes will certainly take the first place, ahead of those built in France."



# THE MOTOR AGE

## FOR AND ABOUT CLUB MEN.

**W**ASHINGTON, Jan. 18. — The senate committee on commerce, to whom was referred Senator Platt's bill to amend Section 4472 of the Revised Statutes so as to permit ferries and other steamboats to carry automobiles using gasoline as a method of propulsion, has carefully considered the measure and has reported it back to the senate with the following amendment:

"Provided, further, that any owner, master, agent, or other person having charge of passenger steam vessels shall have the right to refuse to transport automobile vehicles the tanks of which contain gasoline, naphtha or other dangerous burning fluids."

The report sets forth that the bill was referred to the treasury department for suggestions and returned by the secretary of the treasury, who calls attention to a letter of the supervising inspector general of the steamboat inspection service, which is in part as follows:

"I have the honor to report thereon that the apparent necessity for the proposed legislation arises from the fact that, under the construction of the treasury department of the provision of Section 4472, Revised Statutes, the carriage of 'camphene, XXX naphtha, benzine, benzole, coal oil, crude or refined petroleum, or other like explosive burn-

ing fluids,' is in terms positively prohibited on passenger steamers, and that therefore automobiles with storage tanks filled with the prohibited articles named could not be carried on such passenger steamers."

Then follows the letter of the department to Mr. George W. Chamberlin, president of the Automobile Club of America, previously published in the Motor Age.

Continuing, the inspector general says: "The provision of the bill under consideration, 'that all fire, if any, in such vehicles or automobiles be extinguished before entering such vessel, and the same shall not be relighted until after said vehicle shall have left the same,' seems to this office to remove the greatest danger attached to the carriage of naphtha, or other dangerous burning fluids in the tanks of automobiles, and the fact that the quantity carried is very small removes any objections to the passage of the bill under consideration.

"This office, however, in view of the possible fact that there may be owners of steamboats, who, through their own fears, might object to carrying naphtha or other like dangerous fluid, even in small quantities, on the steamers owned by them, but would be obliged, nevertheless, under the law relating to common carriers, if this bill should become a law in its present form, to comply therewith, thinks it would be well that such owners should be protected by having the right to refuse, without liabil-

ity therefor, to carry automobiles with tanks filled with naphtha or like dangerous oil."

The supervising inspector general therefore recommends that the amendment above quoted be added to the pending bill. In support of this proposition he states that if it should be found that there are no owners of steam vessels who object to carrying automobiles with tanks filled with gasoline, naphtha, or other dangerous fluids this amendment would do no harm; if, however, there are such owners, he thinks they are entitled to such consideration as the suggested amendment would afford. He is very considerate of the tender feelings of steamboat owners. How about those of the growing community of automobile owners?

The amended bill has now been advanced on the senate calendar, and it is the general belief that early action will be taken on it.

#### PEREGRINATIONS IN AN AUTO

Dr. Eckl and George Heering, of Mansfield, O., the latter a leading bicycle dealer, are arranging for an automobile trip abroad. If the weather permits the start will be made in the near future, otherwise it will be deferred until spring. They will make an overland trip to New York in Dr. Eckl's gasoline vehicle and thence by steamer to England and the Continent. They expect to be gone several months.

#### HEAD OF THE ARMY LENDS A HAND

Washington, Jan. 18.—At a meeting held during the week at the residence of Charles E. Foster, a prominent patent attorney and an enthusiastic motorist, steps were taken looking to the formation of an automobile club in this city. In calling the meeting to order, Mr. Foster stated that the object of such a club would be to promote interest in the motor vehicle, to improve the streets and roads in and around Washington, and to lend its aid and influence in all matters pertaining to the automobile. Mr. Foster was elected temporary chairman, and W. J. Foss temporary secre-

tary. A committee of five influential people was appointed to draft a constitution and by-laws. After a very lively discussion of automobile affairs in general the meeting was adjourned subject to call of the chairman. Among the prominent people in attendance were Lieut.-Gen. Nelson A. Miles; Lieut. H. H. Ward, of the navy; W. J. Foss, local manager of the Pope branch of the American Bicycle Co.; A. L. Cline and Rudolph Jose. There were also about twenty others present, including a number of physicians. A number of letters were read during the evening from automobile owners expressing their sympathy with the movement, and their intention of furthering the interests of the proposed club.

General Miles, who is greatly interested in the future of the automobile and who is thoroughly posted on the subject, has been suggested as president of the club. If he can be prevailed upon to take the office he would be able to exert an important influence in behalf of the organization and give it a standing in the community it would not otherwise have.

A special automobile road is planned for Bronx Park, New York city. It will run under the trees and make a complete circuit of the park.

On account of the yet existing law prohibiting the transport of gasoline automobiles on ferry boats, W. K. Vanderbilt, Jr., is reported to have adopted the plan of chartering a special boat each time he desires to take his famous "White Ghost" across the Thirty-fourth street ferry. This action costs \$8 a trip.

There is at present considerable discussion in club circles relative to the character of club runs. On account of the wide speed variance of the different vehicles owned by club members, some club runs have developed into races in which a majority of the participants were hopelessly out of it from the beginning. It is proposed by some to limit the speed of regular runs so that the entire cavalcade can stick together in happy family style, and the chauffeurs given a bet-

ter opportunity to enjoy the pleasure of numbers and to become acquainted with each other, than when each must shuffle for himself in the wake of some other fleeting one's dust.

**All aboard for the Chicago show. Reduced round trip rates.**

The San Francisco Automobile club is a bit slow in following the example set by eastern clubs in the matter of bringing park commissioners to time. San Francisco boasts an extremely exasperating set of park regulations which bar automobiles from the parks, and ever since these were enacted the automobile club has been promising to undertake a test case or two. So far nothing has been done and the parks are still shunned perforce. Brace up, San Francisco.

**There will be an Automobile Exhibition in Chicago March 23 to 30 and it will be worth your while to attend.**

### A LITTLE ABOUT EVERYTHING

The latest yarn of the industry comes from Humbolt, Neb., and is to the effect that a resident of that town, a jeweler, has built for his own use a marvelous automobile which weighs but 149 pounds.

An organization of automobile drivers is said to have come into existence in Paris, under the name of *Chauffeurs-Mecaniciens*, which, being translated, is equivalent to Mechanical Engine Drivers!

Here's a prognostication: Before the first of January, 1904, lady cyclists will have returned to the knickerbocker and short-skirt costumes which were in vogue about three years ago. The why of it is that as motor bicycling develops it will become a sport for women as well as for men, and before long, too. Regardless of marvelous evolution in motor bicycle construction, such machines can hardly be brought to a nicety of design and construction which will render long riding gowns as suitable and desirable as the more abbreviated kind. So, even if horses are to be relegated,

the motorcycle age will likely lead to the development and exhibition of calves.

Dealers and others who expect to attend the Chicago Automobile Exhibition next spring should bear in mind that the Central Passenger Association will allow a round-trip rate of one fare and a third.

**"We will be there," is what makers, dealers and laymen are now saying relative to the Chicago Automobile Exhibition.**

At last week's cycle and automobile exhibition a fair visitor was heard to remark to her trousered companion: "What is the difference between a carbureter and an atomizer, anyway?" The young man is explaining yet.

Charlton Claybrook, an Ohioan who has invented an automobile sled, is now in Colorado with the intention of running his vehicle up Pike's Peak on the snow. The sled is described as being driven by a gasoline motor which operates runners fitted with numerous small spike wheels.

The utility of the motor vehicle for traveling men is again shown by the report that two St. Louis traveling men recently completed a thousand-mile tour on the "road" in an automobile, taking only thirty days for the entire trip and carrying over a thousand pounds of baggage, while in 1899 exactly the same trip was made by railroad and carriage, the time spent being a trifle over eight weeks.

**Come to the Chicago Automobile Exhibition next March.**

An electric carriage was recently placed to a most novel and yet satisfactory use by Dr. Joseph Steadman, of Boston. The physician, in company with a colleague, was called up to perform a delicate and dangerous operation on one of his patients. The light in the room in which the operation was performed being decidedly poor, Dr. Steadman ran his automobile onto the sidewalk. He then ran a live wire from the operating room to the machine, attaching one end to the storage battery and the other to a 32-candlepower incandescent lamp. He



then turned on the current and gained a sufficiently bright light to enable him to perform the operation successfully.

The winter resorts on the sea coast of Florida are rapidly becoming automobile pleasure driving centers. The shell roads and beach stretches are admirably adapted for delightful automobiling, and hundreds of carriages will within a season be seen at the various prominent resorts.

The Boston postoffice department has leased three steam vehicles which will be immediately put into mail collection service, the postmaster having received authority from Washington to carry this plan into effect. Practical tests have shown that 35 minutes can be saved in each collecting tour.

Pittsburg's new automobile fire engine, which was described in the last issue of the Motor Age, was given a thorough trial a few days ago, and much satisfaction was expressed concerning its performance. It is said by the chief of the fire department that as soon as the men get well acquainted with the novel fire fighter, efficient service will be rendered by it.

Mr. Buckley, superintendent of the Rochester Tool Co., recently exhibited to a Motor Age man two of his steam motors of 4 and 7-horsepower respectively, the former weighing just sixty-five pounds. It is noticeable that nearly all of the people in Rochester who are interested in the automobile business are readers of the Motor Age, which they receive either by direct subscription or through the news companies.

In view of the fact that the New Jersey Traction Co. has met with a decided check in its efforts to secure the necessary right of way for its trolley line loop from Newark to Morristown, prominent citizens of the latter place are inquiring into the cost of conducting an automobile line between the two towns. It is probable that within a few months vehicles similar to those now in use in Central Park, New York, with a seating capacity of twelve, and moving at a rate of 9 miles an hour, will be in use

here, and for this purpose a company will be organized with a capital stock of \$100,000.

The German Empress, because of her declining years, has forsaken the riding horse and purchased an automobile for private use.

The socialistic followers of Eugene Debs have started a subscription with view to purchasing an automobile in which one of its missionaries may scour the country rapidly, preaching the doctrine of the party.

**The best show; the brightest show—Chicago, March 23 to 30.**

### NEW AUTO STAGE LINES

The autocarets which caused such a commotion in Washington residence circles recently have been finally taken out of service with view to substituting for them correctly designed and constructed vehicles. The original cars were clumsy and far below the present standard of electrical vehicle construction in America. They were not even fitted with rubber tires, and to the noise and rattle caused by the steel tires on the rough pavements is due mainly the protests against the further use of the cars. From a commercial standpoint the line promises to be a success, and as soon as proper cars are put into duty tranquility and rapid transit will reign in Washington.

Electric carriages now meet all B. & O. trains upon their arrival in New York, Philadelphia, Washington and Chicago. Pamphlets giving concise information concerning rates of charge, kinds of vehicles which may be ordered, etc., are distributed on the trains when they approach any of these cities.

The Plainfield, N. J., Automobile Co. is planning to establish an omnibus line to run over a route which will include many streets in Plainfield which have no trolley lines. The New York Motor Vehicle Co. is said to be interested in the project and to be preparing to furnish the vehicles.

# THE MOTOR AGE NEWS OF THE INDUSTRY.

**P**ARIS, Jan. 21.—(Special Cable.)—"No admittance" is the sign which stares American motor vehicles in the face at the Paris automobile and bicycle exhibition which opened in the Grand Palais to-day. The magnificent edifice, although usually devoted to the realms of art, is gorgeous this week with motor vehicles, motorcycles and bicycles, to say nothing of accessories and material, but among all the 550 firms exhibiting there cannot be found a single American automobile manufacturer. This is not due to lack of enterprise on the part of Americans, but to the fact that the prefect of police recently refused to permit the operation on the streets of Paris of an American steam vehicle, saying that it was dangerous. The promoters of the show have followed his lead and turned down American makers who desired to exhibit steam carriages. When the Parisians speak of steam vehicles in Paris being dangerous they mean that they are dangerous competitors. At least no other specific danger has ever been pointed out.

Despite the absence of American autos at the show, bicycles built under the Stars and Stripes were in plain evidence in the vast rotunda and galleries of the palace devoted to the show. These were mainly the products of the American Bicycle Co.

Much interest is manifested in the exhibition and large crowds are expected throughout the week, with a fair leavening of blue-blooded patronage.

Gasoline vehicles, of course, rule the

day, and these are mainly of French and German manufacture. The visitor is furnished a wide range of sights in such vehicles and given opportunity to study the construction of all patterns of rigs, from light 2-horsepower voiturettes to immense racing cars of 24-horsepower and over. There are also on exhibition several automobiles of historical prominence.

## BUSY ON DE DION PARTS

Cleveland, Jan. 21.—The Peerless Mfg. Co. is working a large force on screw machine parts, gears, etc., for De Dion motors, to be used by the Eastern De Dion concern. The company is also putting through a number of vehicles of the pattern described in these columns some weeks ago, to be marketed under its own name. It seems that there is a reciprocal arrangement between the two concerns, and the vehicles produced will be almost identical.

## MORE TIRE LITIGATION

Akron, O., Jan. 19.—The Consolidated Rubber Tire Co., in answer and cross petition filed to-day, asks judgment against the Goodyear Tire & Rubber Co. for \$150,000. Several weeks ago the Goodyear Company brought two actions. It alleged that the consolidated company was indebted to it on account to the sum of \$51,831.80. In the answer the defendant company denied that it is indebted to the plaintiff in any sum. By way of cross-petition it alleged the following:

A contract was entered into by two parties to the action by which it agreed to purchase the tires, bicycle and vehicle manufactured by the plaintiff. It was further agreed that the tires were to be made of a certain quality of rubber. The plaintiff agreed to cancel all existing contracts it had with dealers for the sale of tires. In connection with this clause of the agreement the plaintiff furnished the defendant with a list of the parties with whom it had contracts.

It is now claimed that the Goodyear company failed to carry out its part of the agreement and that its alleged acts have injured the Consolidated company to the tune of \$150,000.

The Goodyear people, of course, assert that they fulfilled their contracts and that the bill of the defendant is still due them.

#### QUAKER BOARD OF TRADE LOSES

The Philadelphia Cycle Board of Trade seems to have lost the day to Le Cato & Schrichter, as Philadelphia show promoters. The latter were first in the field and secured the pick of the exhibitors and the backing of the Pennsylvania Automobile club. Then the old board announced a show a week ahead of the other but has been unable, up to date, to make much headway. There are stories afloat of free space, purchases of vehicles and other expedients to fill the building.

#### HANDSOME AUTO STORE BURNS

Washington, Jan. 19.—The handsome three-story and basement automobile and bicycle establishment at 817 Fourteenth street, owned by Col. A. A. Pope, and occupied in part by the Pope branch of the American Bicycle Co., was gutted by fire on the evening of January 18, causing a loss estimated at \$150,000. The fire broke out shortly before 7 o'clock, and, although very little is known as to its origin, it is believed to have started in the basement. The flames spread to the main floor and through the elevator shaft to the third story in a few minutes.

Manager Foss was soon on the scene

and witnessed the destruction of the handsome building. When seen by the Motor Age man he said he had no idea as to the origin of the fire. There was absolutely no gasoline or other inflammable material kept about the store, except three cans of gasoline, which were kept in the rear of the building, and which were dragged away from the fire by one of the employees.

Between 350 and 400 bicycles were stored in the basement, while on the main floor about sixty machines were used for display purposes. All of these were totally destroyed, together with a Toledo steam carriage, a Rambler hydrocarbon carriage and a Waverly electric carriage. When the fire first broke out a man living two doors above the store rushed into the burning building and brought out a Cleveland motor tricycle. He also tried to bring out a Waverly automobile, but could not get it further than the door. At this point an employe of the store rushed in and guided the big machine down the steep incline to the rear alley, while its top burned fiercely.

The Pope building was one of the finest bicycle stores in the country. It was erected about four years ago by Colonel Pope, and had been leased to the American Bicycle Co. The colonel expended about \$90,000 on the building. Both the building and the stock were insured. The loss to Colonel Pope and the American Bicycle Co. will be about \$100,000.

#### NEW INCORPORATIONS

New York.—The Ledvina Multi-Expansion Motor Co. Capital, \$10,000.

Columbia, S. C.—The South Carolina Automobile Co., capitalized at \$10,000, to operate electric carriages for livery purposes.

New York.—The Progressive Cycle & Automobile Co., capitalized at \$6,000, to deal in bicycles and automobiles.

Jersey City.—The Keystone Automobile & Transportation Co. Capital, \$1,500,000.

Dayton, O.—Limited partnership formed between R. H. Croninger and Earl H. Ki-



ser, under the style of R. H. Croninger, Ltd., to manufacture motor vehicles.

Trenton, N. J.—The Forest Automobile Co. Capital, \$250,000.

The Marine Engine and Machine Co., 80 Broadway, New York city, has absorbed the Marine Vapor Engine Co., and expects to largely increase its business in accordance. The company's works are at Harrison, N. J.

**Remember that reduced railroad rates have been granted for the Chicago Automobile Exhibition next March.**

The Fanning Mfg. Co., of Chicago, showed an electric runabout at Madison Square Garden last week that "asked no odds" of any vehicle on exhibition. The company is about ready to manufacture, having completed all its tools at the old factory. It will be ready to deliver vehicles in the spring.

**The National Association of Automobile Manufacturers is a fair body and it has recognized a fair enterprise in withdrawing opposition to the Chicago show.**

The Electric Alarm Water Gauge Co., with offices at Mason and Belden streets, has been organized by W. L. Rodgers to manufacture the electric alarm water gauge recently described and illustrated in these columns. The device appears to be attracting considerable attention among manufacturers of steam motor vehicles.

While at the New York cycle show last week, George Collister, of Collister &

Sayle, well known local bicycle dealers, closed with E. L. Ferguson, the new missionary at large for the E. R. Thomas Motor Co., of Buffalo, to handle its motor bicycles in Cleveland.

#### **Everybody will be at the Chicago Show.**

James Locherle, of Toronto, one of the principal independent bicycle makers of Canada, adds to his renewal for subscription for the Motor Age, the following bouquet: "We would not be without the paper for double the money. Further we would say we always look forward to its coming. We wish your journal a continued success."

**Representative of all branches of the industry, the Chicago show will furnish dealers with an unparalleled opportunity to learn.**

The J. H. Neustadt Cycle Supply Co., of St. Louis, has sold its entire wholesale bicycle supply business and will embark exclusively into the jobbing of motor vehicle and carriage supplies. The company invites correspondence from manufacturers of automobile parts who desire representation in the south and west.

**The trade, the public and the press favor the Chicago automobile exhibition to be held March 23 to 30 in the new Coliseum.**

Chas. E. Miller, the New York jobber, showed in connection with his varied and complete line of automobile building material at last week's Madison Square show, the New Century runabout frame and body.





## Heavy Traffic

That the problem of heavy hauling by self-propelled vehicles is securing a substantial foothold in the industry is not only demonstrated by the formation in America of such concerns as the Thornycroft Steam Wagon Co., which exist with the especial purpose of making and exploiting heavy steam wagons, but also by the fact that several manufacturers who have heretofore given their entire time and attention to the production of light carriages are now experimenting with vehicles of the heavy class.

If the rapid development of the automobile industry as a whole during the last three years may be cited as a criterion of advances to be made along specific lines, it is certain that before the end of the year many companies will be engaged in the erection of steam "lurries."

The Milwaukee Automobile Co., of Milwaukee, has recently supplemented its regular line of work on steam carriages by producing the steam truck shown in the accompanying illustrations and capable of hauling a 4,000-pound load. The company, in sending photographs and drawings of this vehicle to the Motor Age, writes as follows concerning it, and calls attention to several points in steam truck construction which are worthy of further discussion:

"This truck has been constructed by us to help decide the question of heavy haulage. It was our original intention to have constructed a heavier type of vehicle altogether; in fact, one capable of carrying a load of six to eight thousand pounds, but an examination of the American roads, in the light of many years' experience on the best English roads, convinced us that the heavier type of vehicle, on plain steel tires would be so liable to be stalled, and unable to work through bad roads and climatic influences, that we gave up the idea in favor of this lighter vehicle, able to move rapidly, and particularly over any surface.

"We look upon this vehicle as about

the maximum size that can be operated on existing sizes of rubber tires. It is of course to the outsider a great departure to propose that goods traffic in city streets should be conducted on vehicles using resilient tires, and the first impression would be that the cost of the tires would kill the utility of the vehicle. Precisely the same objection was taken fifteen years ago to the general use in London of rubber tires on streets cabs, and it was objected that these tires could not possibly be used on a vehicle whose total earnings were limited by law to 12 cents a mile. As a matter of fact, the introduction of rubber tires, made possible profitable use of a far higher grade of vehicle, at the same rates that had before been earned by very inferior cabs. In our opinion it would pay to use rubber tires on the very heaviest vehicles, provided a tire could be obtained with area enough to resist excessive wear.

"It must be borne in mind that the earning power of a steam vehicle of this stamp is about 25 cents for every ten minutes of active work, and it pays, above all other considerations, to keep the vehicle in such condition that there



The Milwaukee Steam Truck

is a minimum of unexpected and trivial break down. When, in addition, the means taken to prevent this, also operate very largely in minimizing the depreciation is the accepted fact, when a vehicle is

fitted with resilient tires as against steel tires, the argument appears to us irresistible; even should these tires in practice, as is very possible, cost as high as 10 cents per car mile.

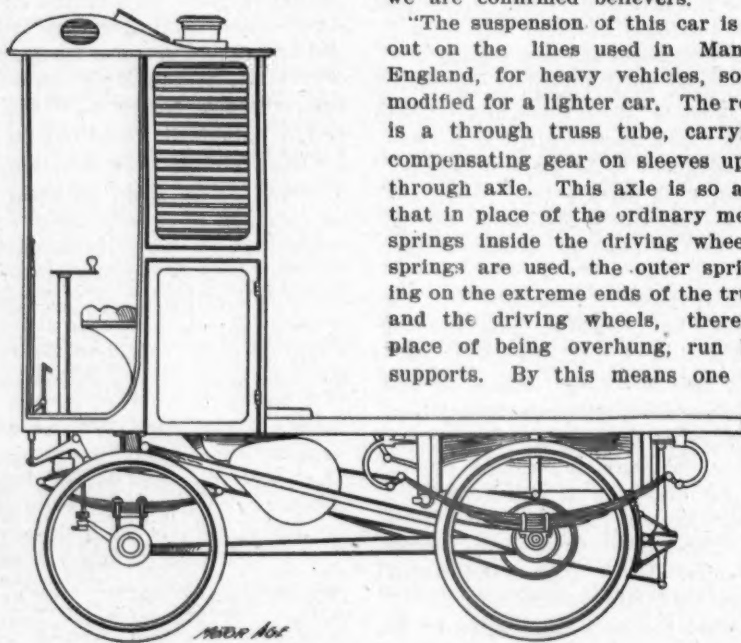
"It was the intention of this company to use the Simpson & Bodman system of flash boiler and control without a departure from their English practice, but we were unfortunately prevented from carrying the scheme out by the extreme difficulty of getting the correct tubing for the special boiler delivered to us within any reasonable time. In addi-

we used superheated steam, for which, of course, it was originally designed. Every arrangement exists on it for obtaining factors of cost of working, and shortly we shall commence a series of detailed tests.

"The following is a description of the various parts:

"The framing, reach bars, radius bars, and all parts liable to excessive twist, or working chiefly in compression, are of seasoned oak, in the free use of which trucks liable to rough service and which must be built at moderate prime cost, we are confirmed believers.

"The suspension of this car is carried out on the lines used in Manchester, England, for heavy vehicles, somewhat modified for a lighter car. The rear axle is a through truss tube, carrying the compensating gear on sleeves upon this through axle. This axle is so arranged that in place of the ordinary method of springs inside the driving wheels, four springs are used, the outer springs being on the extreme ends of the truss tube and the driving wheels, therefore, in place of being overhung, run between supports. By this means one of the



SIDE ELEVATION OF THE MILWAUKEE STEAM TRUCK

tion to this we had satisfied ourselves in England as to the feasibility of the flash boiler and the possibility of its application to circumstances favorable to its use. We were very desirous to see how the system would operate, using a generator that should be a development, as far as possible, of the tubulous or fire tube boiler that is universal on steam automobiles in this country and which we ourselves use.

"The truck has only been under steam once or twice as it is barely yet completed. So far it seems to us that it will be as satisfactory in its economy as if

causes of failure of many auto cars, through binding of the differential gear because the axle gets out of line, is avoided.

"The front axle is a steel forging, and is embedded in oak on the compression side. The two axles are connected by oak reach bars, and radius bars are used to connect the axles with the load.

"The wheels are standard Sarven wheels fitted with International sectional tires, which so far are giving promise of admirable work. They have run this truck under conditions where it would be absolutely impossible to move

the steel tire vehicle a foot, and where even plain pneumatic tires on motor carriages are slipping very badly.

"A foot brake, arranged to act as a double tension band brake on the differential gear box, is available for all normal stopping, and the screw tire brake connecting on the back of the wheels is arranged to work very powerfully under emergency conditions. In addition, the reversing of the engine is available for retardation purposes.

"A horizontal hand wheel actuating a worm gear which in turn revolves a small pulley round which a plain block chain winds, comprises the steering gear. It is simple, powerful and easily repaired, whilst the use of the chain gives a much larger arc for turning than can be obtained by the use of rods.

"The water tanks are directly over the driving axle, and the kerosene tank is quite at the rear of the car. The effect of this is to place a weight of practically 1,000 pounds immediately over the driving axle for traction when running light.

"The capacity of the water tanks is 550 pounds and of the oil tank 170 pounds, with a cubic air capacity of 750 cubic inches. This is practically equivalent to 20 and 60 miles running, respectively.

"The engine is placed at the rear of the cab, partly above and partly below the platform. It is a three-cylinder, single-acting engine, with splash lubrication, with the water supply to the pumps carried round the base of the crank chamber.

"The engine transmits its power by two sets of gears, one in the ratio to the driving axle of four to one, the running speed of which is ten miles per hour. The other with a ratio of eleven to one, admits of the full power being used at a speed of four miles per hour. A positive clutch actuated from the driver's seat, and arranged with a steam lock, which prevents its being shifted when the engine is under steam, controls the use of these gears. The final drive from the gear shaft to the rear axle is by a chain, and the whole motor and transmission is so arranged that it is entirely in the center line of the vehicle, without

through shafts crossing the car. It is, therefore, unaffected by twist strains.

"The generator is a plain fire tube boiler with 150 square feet heating surface, arranged to work at 225 pounds and fired by two single nozzle vaporizing burners, using heavy kerosene. Practically the whole of the gear is in the cab, which owing to excessive variation in temperature in this district is arranged so that very free ventilation is obtained in summer. The cab is entirely enclosed at the present time.

"The conveniences of control are: Screw brake, reversing and steering, controlled by the left hand; throttle valve, live steam to water tanks (to prevent them from freezing) and water bye-pass, controlled by the right hand; foot brake with the right foot."

#### AN ESTIMATE OF COST

Sentiment does not count with the business man who attempts to solve the horseless problem. If the horse is doomed in business traffic there will be no tears shed for his departing spirit, mane or tail. He goes as an expensive habit contracted through necessity, and when the necessity disappears and the expense of maintaining the noble equine as a common factor in business can be generally obviated by other and cheaper methods of transportation, you can recklessly bet your proverbial last dollar that he will go without being given a chance to cast even a lingering backward look.

Just now there is considerable press comment and daily discussion and experiment concerning the introduction of steam freight trucks to displace the heavy horse drawn vans of common usage. The manufacture of such vehicles is at present, of course, limited, in this country, to a few concerns, but as soon as it has been demonstrated to the satisfaction of business men that the new form of truck can do satisfactorily the work of the old, and do it cheaper, their production for commercial adoption will rapidly increase.

That the steam truck can haul heavier loads at faster speeds than the horse



drawn truck is undisputable. Those who have used the trucks say that the hauling can be accomplished so much cheaper than the extra initial expense of equipping with steam trucks is not only overbalanced but a considerable yearly saving is made. Various comparative estimates have been made in this line and several have been previously published in the Motor Age.

Following is the table of comparative figures compiled from the results of eighteen months of work at a large brewery of a 3½-ton steam dray:

#### The Steam Truck

Cost of Wagon, \$3,000.00—	
Interest at 5 per cent per annum....	\$ 150.00
Depreciation at 15 per cent per annum .....	450.00
Working Expenses—	
Fuel, 15 lbs. of coal per vehicle mile, 33 miles per day, 300 per year. 15x33x300—2,240—66.3 tons of coal per year.	
Coal at \$4.50 per ton, 66.3x4.50—	\$298.00.
Cost of fuel.....	298.00
Water, 11 gallons per vehicle mile, 11x33x300—108,900 gallons, at 40c. per 1,000 gallons.....	43.00
Repairs, material and labor.....	252.00
Oil, waste and stores.....	48.00
Rent, taxes and insurance.....	54.00
Wages of driver, at.....	600.00
Total per annum.....	\$1,895.00
The steam truck hauls 3 tons 5 miles per hour for 10 hours, 3x5x10—150 net tons.	
Working 300 days, 300x150—45,000 net ton miles per year.	
Total expenditure, \$1,895.00 divided by 45,000—4.2c. per ton mile; the cost for hauling, therefore, being 4.2c. per mile at a speed of 5 miles per hour.	

#### The Horse Truck

First Cost of 2-horse Dray—	
One 3-ton dray.....	\$300.00
Two dray horses, at \$200.00 each.....	400.00
One set of double harness.....	90.00
	\$790.00
Working Expenses—	
Interest at 5 per cent.....	\$ 39.50
Depreciation at 15 per cent.....	118.50
Wagon repairs and maintenance....	96.00
*Stabling, maintaining, shoeing, rent per horse per month at \$30.00.....	720.00
Driver's pay per annum.....	600.00
	\$1,574.00
Two horses harnessed to one wagon can haul a net ton load of 3 tons, at an average speed of 2 miles per hour for 7 hours, 3x2x7—42 net ton miles.	

42x300 days—12,600 net ton miles per annum.  
\$1,574.00—12,600.00—12.5c. per ton mile.

#### The Two Compared

Two-horse wagon, 12.5c. per ton mile.  
Steam truck, 4.2c. per ton mile.  
Saving for steam truck per ton mile, 8.3c.  
45,000 net ton milesx8.3—\$3,735.00.  
Therefore, on a basis of 45,000 net ton miles, the saving per year from the use of the steam wagon is \$3,735.00.

#### A SIGN OF THE TIMES

The following touching story of a youthful motor enthusiast's disappointment tells well the story of popular interest in the twentieth century vehicle. It comes from Harry R. Geer, who deals in automobiles and bicycles in St. Louis:

"The automobile business in St. Louis is certainly making gigantic strides. This morning a young man about seventeen or eighteen years of age, riding a bicycle, but minus one leg, and in a very dilapidated suit of clothes, stopped in front of our store, and entering asked the bookkeeper if she had any gasoline engines. This was somewhat of a startler to the bookkeeper, as she has not yet got used to having one-legged newsboys come in in a hurry for gasoline engines, and when the writer, who was in the shop, responded to the bell, he was met with the same inquiry.

"This also slightly rattled the writer, and he stated that he had a 12-horsepower gas engine on the premises, and the reply was: 'Gas engine? Let me see that,' but when he saw it he said: 'No; I have a little wagon, and I want to put a gasoline engine on it,' and it was learned that he had built a small wagon by using the wheels of a baby carriage and a soap box for the body, and he intended to equip it with a gasoline engine to deliver his papers with. When informed that a motor and the necessary appurtenances would cost in the neighborhood of \$200 he said: 'Gee, that's too much. I only wanted it to have a little fun and deliver papers with, and thought it would cost about \$5 or \$10.'

"If the boy has as much enterprise in the sale of papers as in their delivery, it will undoubtedly be but a short time before he will be able to purchase a gasoline motor."



# THE MOTOR AGE

## INFORMATION FOR BUILDERS AND BUYERS.

### ELECTRICALLY WELDED RIMS

The seamless steel automobile wheel rim recently announced by the Standard Welding Co., of Cleveland, is proving one of the most attractive articles ever brought out by that concern. Manufacturers who see the rim are impressed with its distinctive qualities and the demand is already proving extremely large. Great care is exercised in finishing, so that the rim is absolutely true, giving a uniform tension on all spokes. By the aid of the electric welding process the joint is rendered invisible, and of course there is no lap or lump at the point of joining. A number of shipments have recently been made in  $2\frac{1}{2}$  by 28 inch rims, and in the near future all sizes will be furnished. The size mentioned bids fair to become standard for vehicles of medium weight.

### THE LOOMIS A GOOD CLIMBER

At the Madison Square cycle and automobile show last week the Loomis Automobile Co. gave a demonstration of the hill climbing qualities of its gasoline vehicles. A Loomis carriage was made to climb the runway from the basement to the first floor, which is estimated to be a 40 per cent grade. Over this grade are placed 2 by 4-inch cleats to prevent slipping when walking up and down. The Loomis company states that the carriage was stopped and started at any point on this difficult surface, al-

though the vibration in going over the cleats was enormous.

### DURYEA PRICE REDUCED

In its catalogue the Duryea Power Co., of Reading, Pa., announces a reduction in price from \$1,500 to \$1,250 for its gasoline phaeton. The company states that its increased factory facilities during the recent months have made it possible to announce this reduction in price without lessening the quality of the machines. Another new feature of the Duryea phaeton is the provision behind the dashboard of a box which serves both as a luggage receptacle and as a child's seat. The arrangement also makes these vehicles better suited for touring, a use to which they are said to be particularly adapted because of high motive power combined with light weight.

In looking over the Duryea catalogue a small feature of Duryea construction is noticeable which illustrates the carefulness exerted throughout in the manufac-



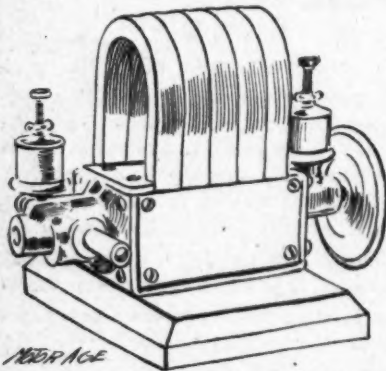
Duryea Self-Oiling Chain

ture of these vehicles. This is the self-oiling drive chain. It is shown herewith. The central blocks are bored to form a chamber in which felt soaked in oil is placed. This

chamber intersects the pin holes and permits the oil to find its way to the bearings. The felt also projects from the face of the block and by contracting with the sprocket wheel tends to deaden the usual click of the chain as well as to keep the face of the sprocket well oiled. The chain was patented in September of last year.

#### THE RUNYEN MAGNETO

The magneto as a sparking current producer seems to have become an important factor in American gasoline carriage building. A few years ago there was but one American carriage whose motor was equipped with a magneto. Now, not only are there many makes of carriages so constructed but numerous



The Runyen Magneto

firms are introducing magnetos especially contrived and manufactured for automobile use. One of the most recent introductions of the kind is the automobile and launch magneto shown in the accompanying illustration and which is marketed by James Runyen & Son, of Redkey, Ind.

The machine weighs but  $9\frac{1}{2}$  pounds, and has extra long bearings, large automatic grease cups, toothed drum armature, and copper commutator. The makers claim that it is far superior to batteries for all ignition purposes, that the machine never fails to produce a perfect spark and is not injured by high speed. The speed should be about 2,000, but a speed of 1,500 produces a good spark and any speed under 8,000 will not injure it. It is driven by a small friction wheel,

and the machine is pivotally mounted upon its base, having a light coil spring to keep the friction wheel against the fly wheel of engine. They are also furnished with a double friction wheel, giving two speeds, which enables one to start the engine without the use of batteries.

#### GEARLESS VARIABLE SPEED DEVICE

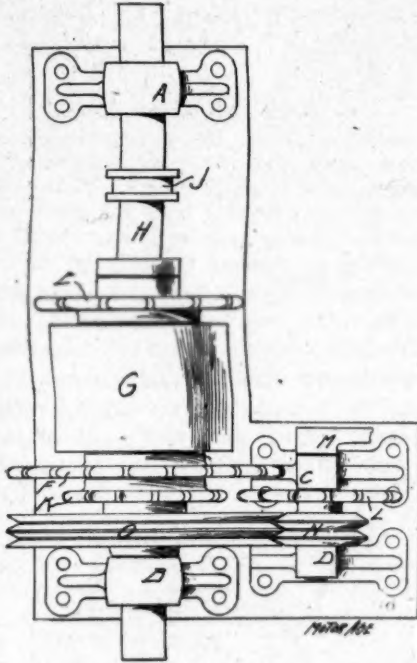
The Empire Motor Works, of Buffalo, has brought out a variable speed transmission device which is now being successfully used by several manufacturers of motor vehicles. The Empire transmission gear furnishes two forward speeds and one reverse speed. The accompanying plan view shows its distinctive and simple construction.

The moving parts are mounted in the hangers A, B, C and D, which are fitted with bronze bearings. E and F are sprockets which are loosely mounted upon the shaft H. Between them is the company's original clutch mechanism, enclosed in the case G and operated by the sliding ring J. The movement of the ring J binds the sprocket wheel E to the shaft H and releases F, or vice versa, according to the direction given it by the operating handle.

Attached rigidly to the slow speed sprocket F is a sprocket K whose chain runs over sprocket L, mounted upon an eccentric countershaft M. Rigidly connected with the sprocket L, but loosely mounted upon the shaft M, is the double friction cone N. A lever arm from the shaft M terminates in a foot pedal, to be disposed in the forward portion of the carriage so that the driver of the vehicle may, by pressing upon it, cause the friction wheel N to engage the corresponding friction wheel O, secured rigidly upon shaft H. This engagement, which is effected while the clutch G is in a neutral non-binding position between the sprockets E and F, furnishes the reverse speed. It is of course understood that the sprockets E and F are driven directly from the motor shaft.

This transmission device is made in two sizes suitable for motors of from 3 to 5 and from 5 to 8 brake horsepower, respectively, at a speed of 500 revolutions

per minute. The complete set is mounted on a hardwood board, iron lined under the hangers, and is ready to bolt to the body or running gear. Each one is guar-



The Empire Speed Change Gear

anteed to carry the rated horsepower for which it is intended.

#### EXHAUSTIVE LINE OF MATERIAL

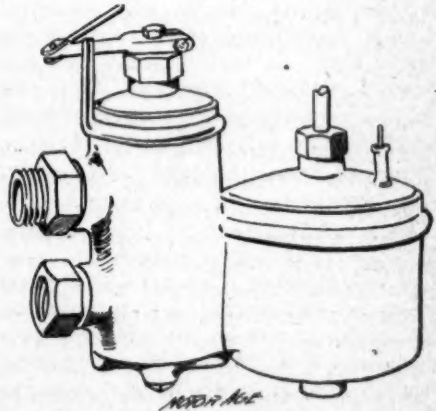
From the new catalogue supplement of the St. Louis Automobile & Supply Co., of St. Louis, is taken this description of the Dyke float type carbureter, which is illustrated herewith. This carbureter, it is asserted by the St. Louis company, works satisfactorily under all conditions, is unaffected by cold weather and the grade of gasoline used. The maker claims that it is more satisfactory than the common vaporizers. The speed of the motor is under control by a single operating lever. It delivers an accurate amount of vapor for each suction stroke of the motor regardless of the speed at which the engine is running, and thus assists the difficult task of starting the motor. The supply ceases automatically and positively if the mo-

tor is accidentally stopped. Further claims for this carbureter are that there is no waste of gasoline and no choking of the motor. The company is so confident of its successful operation that it offers to refund the purchase price to any one who does not find it to be as represented. It is made in sizes suitable for engines of from one to eight horsepower and works on any kind of gasoline engine. One carbureter is suitable for a double-cylinder motor.

The second illustration herewith shows Dyke's automobile tool set which is said by the St. Louis concern to be the first kit of its kind to be placed on the American market. The illustration explains itself, although it may be added that nearly all the tools are combination tools to serve various purposes.

The company is making a specialty of Dyke's chain and bearing lubricant and gasoline engine cylinder oil. The chain lubricant is in the form of a paste which will not gum or wear out of the bearings readily, as do some other forms of oil. It having been kept in view that a higher grade of oil is required for gas engine cylinders than is commonly used in steam engines, the Dyke oil for the former purpose is produced of a specially selected grade of refinement and is guaranteed.

In addition to its large line of automo-

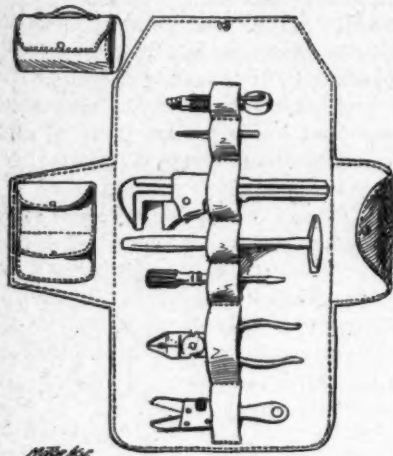


The Dyke Float Carbureter

bile parts and supplies the St. Louis company is manufacturing a light carriage driven by a 5-horsepower, water-

cooled gasoline engine of new design. The carriage weighs but 750 pounds and has many new features which are de-

signed and built all the machinery now being used by the concern with which he was formerly connected. His two sons, both of whom were foremen with the Cleveland Ball & Screw Co. will be associated with him in the new venture.



The Dyke Automobile Tool Kit

scribed in the company's catalogue. It is known as the Dyke Automorette No. 01.

#### NEW BALL MAKER ANTICIPATED

Frederick Schultz, who was one of the organizers of the Cleveland Ball & Screw Co., and who has been superintendent of its factory, has resigned the position to go into the manufacture of a new line of machine tools, and it is quite possible that he may decide to take up manufacture of steel balls of the larger sizes. It is understood that Mr. Schultz withdrew from the Cleveland concern because of his dissatisfaction with the new ball selling pool which is conducted under the head of the Central Distributing Co., of Buffalo. Mr. Schultz believes that the price of balls has been increased so materially by the new arrangement that there is now an excellent opening for an independent manufacturer and he will probably take advantage of it, although he says he will confine himself to the larger sizes as being the most profitable. Mr. Schultz is the inventor of a number of improvements in ball making machinery and he

#### IT LIGHTS THE WATER GLASS

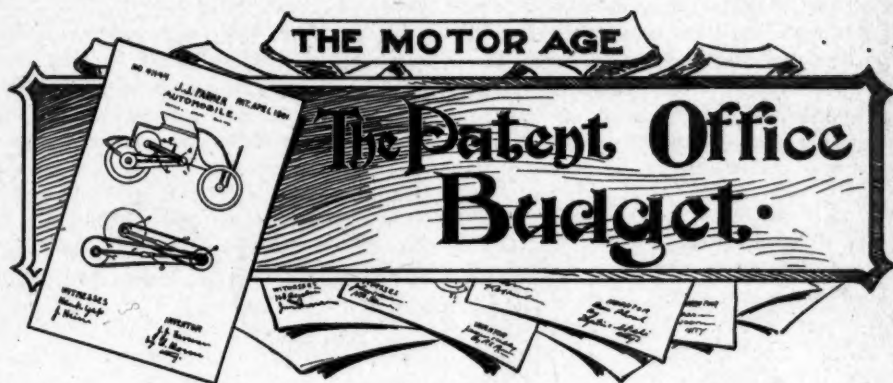
Gray & Davis, the enterprising carriage lamp manufacturers of Amesbury, Mass., have recently brought out a useful novelty is a side lamp for steam vehicles. It is a regular lamp, which, in addition to lighting the pathway of the carriage, throws its rays upon the water-glass of the boiler and thus enables the driver to keep his eye on this important functionary without being compelled to provide it with separate lights. The double lighting effect is produced by means of an auxiliary lens placed obliquely in the bottom of the combustion



Gray & Davis Water Glass Light

chamber and so related to the reflector that an independent stream of light will be projected downwardly on the water boiler glass.





**S**AYS THE inventor of the elastic vehicle tire: "Men may come and men may go, but I go on forever." At least so it seems from the board-bill regularity of patent grants for tires of various types. Some of them are practical and some are not; in fact, all the shades of and between good, bad and indifferent are represented. Still the subject develops interest in that it presents the commercial need of better tires. Invention in this line is not old enough to be wearisome. The regular quota of tires is included in the week's grant.

### THREE VEHICLE TIRES

Letters patent No. 666,179, dated January 15, 1901, to Chas. E. Bradish, Moline, Ill. This is a solid rubber tire secured in a channeled felly by means of the usual pair of wires, and characterized by side lips which extend over and cover the edges of the felly, with side spaces beneath these lips that allow the tire to expand or contract without being influenced by strain. The lips prevent the entrance of sand, gravel and dirt.

Letters patent No. 665,898, dated January 15, 1901, to William R. Giddeon, of Knoxville, Tenn. The channeled felly provided for common forms of solid rubber vehicle tires is replaced in this tire by a central annular ridge on the rim, which engages a corresponding groove or depression in the rim surface of the tire. The rim is slightly dished

on each side of the central projection. The ridge and groove may be reversed, if desired, the ridge being formed on the tire and the groove cut into the rim. Wires, bands or other binders of common practice may be used as in ordinary channel fitted tires.

Letters patent No. 666,166, dated January 15, 1901, to Joseph E. Ulsh, of Altoona, Pa. In this tire the spring tread is again presented for consideration, this time in the form of a U-shaped tire cover mounted upon a series of bow springs of flat steel. The cover is of spring steel covered with rubber.

### TILESTON'S IGNITION TIMER

Letters patent No. 666,239, dated January 15, 1901, to Clarence A. Tileston, of Binghamton, N. Y.

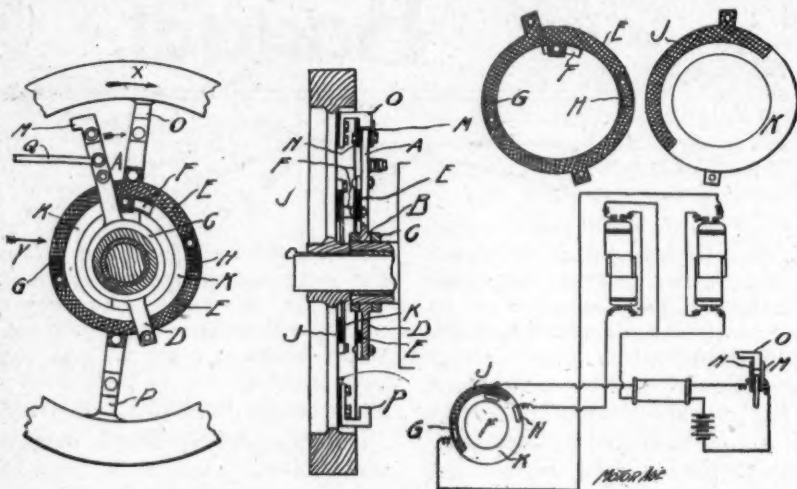
This patent covers the entire range of motor vehicle construction from arrangement of motors and transmission of power to construction of the steering mechanism. The several power and transmission factors are closely related, as for varying the speed of the vehicle all three of the methods possible with hydrocarbon machines (ignition timing, motor throttling and mechanical speed gearing) are employed. The most notable feature of the invention is the construction specified for the ignition timing device and its controller. This system is described as arranged for governing two double cylinder motors.

An arm is shown as projecting from a

collar B, the collar being secured on the crank shaft bearing. Collar C prevents any sidewise movements of the arm, though the arm is adapted to be given a slight movement of rotation about its support. The collar B has a second arm D, and the arms A and D serve to support a ring E of insulating

the ring, a circuit is closed through the ring between the contact G and the contact F.

The igniting devices employed are preferably of the ordinary well-known jump-spark description, and the plugs of each pair of cylinders are wired in series. Two secondary circuits are



TILESTON'S IGNITION TIMING DEVICE FOR GASOLINE VEHICLES

material. The ring E carries three contacts, being marked F, G and H respectively. To the flywheel is secured by bolts a ring J of insulating material, this ring having inlaid therein a ring K of conducting material of the shape shown in the detailed views. The outer part of the compound ring is made up of a half-circumference of conducting material and a half-circumference of insulating material, while the inner portion of the compound ring is entirely of conducting material.

The contact F on the ring E is arranged so that it always bears against the conducting portion K of the compound ring. The contacts G and H are arranged on the ring F 108 degrees apart, so that when one of these contacts is on the conducting portion the other is on the insulating portion J. When, therefore, the contact H is on the conducting portion of the ring, a circuit is closed through this ring between the contacts H and F. When the contact G is on the conducting portion of

therefore employed, one of these circuits containing the igniting devices for one pair of cylinders and the other circuit containing the igniting devices for the other pair of cylinders. The contacts F and H control the secondary circuit for one pair of cylinders, and the contacts F and G control the secondary circuit for the other pair of cylinders.

The arm A has further secured to it two circuit terminals or contacts M and N, which are in the primary circuit of the igniting devices. The flywheel carries two bridge pieces O and P of conducting material, but insulated from the flywheel. Each of these bridge-pieces is arranged to pass between the contacts M and N, and makes and breaks the circuit at this point. The bridge piece O establishes a circuit between the contacts M and N, while the circuit is closed between G and H. It is to be understood, however, that the primary circuit controlled by the contacts M and N is both made and broken while the

secondary circuit controlled by the contacts G and H is established. The secondary circuit, through the jump-spark devices, causes the spark in the pair of cylinders in the circuit. In the same manner the bridge piece P makes and breaks the primary circuit between the contacts M and N, while the secondary circuit is established between F and G.

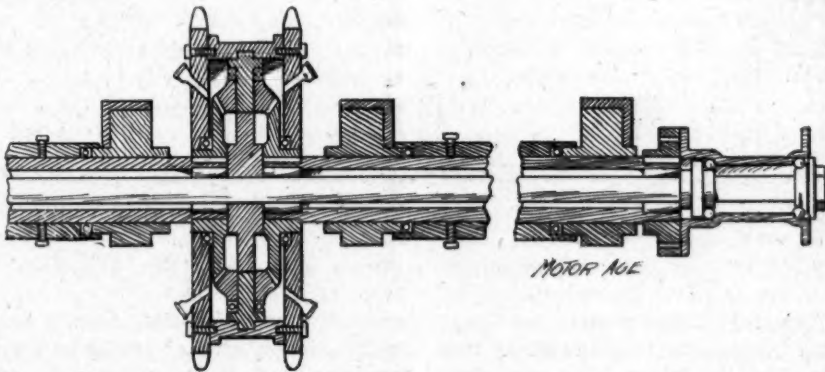
Inasmuch as the flywheel is connected to the crank shaft, which is of course in turn connected to the piston, the position of the bridge pieces O and P and the position of the conducting portion K and the insulating portion J is always unvarying with relation to the stroke of the piston—that is to say, the bridge pieces and the ring, with its insulating portion, are always at the same point in circumference at the time when the piston occupies any given position. If the arm A is caused to change its circumferential position with relation to the crank shaft bearings, it will be seen that the bridge pieces O and P will pass into and out of contact with their co-operating terminals M and N either earlier or later in the revolution of the flywheel. Any shifting of the position

and the arm A is moved in the direction of the arrow Y, the making and breaking of the circuits will take place later in the stroke of the piston, and consequently the ignition will be later and the speed of the motor will be slower. If, on the other hand, the arm A be moved in the other direction, the reverse of the operation described will take place.

#### REAR AXEL AND DIFFERENTIAL

Letters patent No. 666,085, dated January 15, 1901, to Robert H. Cloughley, of Parsons, Kan.

Mr. Parsons aims to maintain alignment and lessen strains and end thrust upon divided rear axle and differential gear parts by the interposition of several sets of end thrust ball bearings and by the use of a hollow rear axle through which extends a solid axle. The hollow axle, which is the divided one driven by the "jack-in-the-box" differential, is mounted on the solid axle by roller bearings. Ball bearings at the extremities of the inner axle ends support the wheel hubs, which are rigidly secured



CLOUGHLEY'S REAR AXLE AND DIFFERENTIAL

of the arm A will carry the ring E and its contact F, G and H around with it, so that the contacts G and H will run off the non-conducting portion J of the ring earlier or later in the revolution of the flywheel, according to the change made in the position of the arm. That is to say, if the wheel is rotating in the direction of the arrow X in the side ele-

vation and the arm A is moved in the direction of the arrow Y, the making and breaking of the circuits will take place later in the stroke of the piston, and consequently the ignition will be later and the speed of the motor will be slower. If, on the other hand, the arm A be moved in the other direction, the reverse of the operation described will take place.

There are two frame supports for the axle on each side of the differential, and between each pair are placed two ball end thrust bearings. The revoluble sides of the differential are also furnished with thrust bearings against the outer faces of the side gears of the dif-

ferential, which is driven by two chains instead of one, the stated object being to equalize the driving strain on the gears. An additional feature of the differential is the provision of a central collar wheel which performs the several offices of spacing the bevel gears, retaining the roller bearings in place and holding the bevel pinion studs in position.

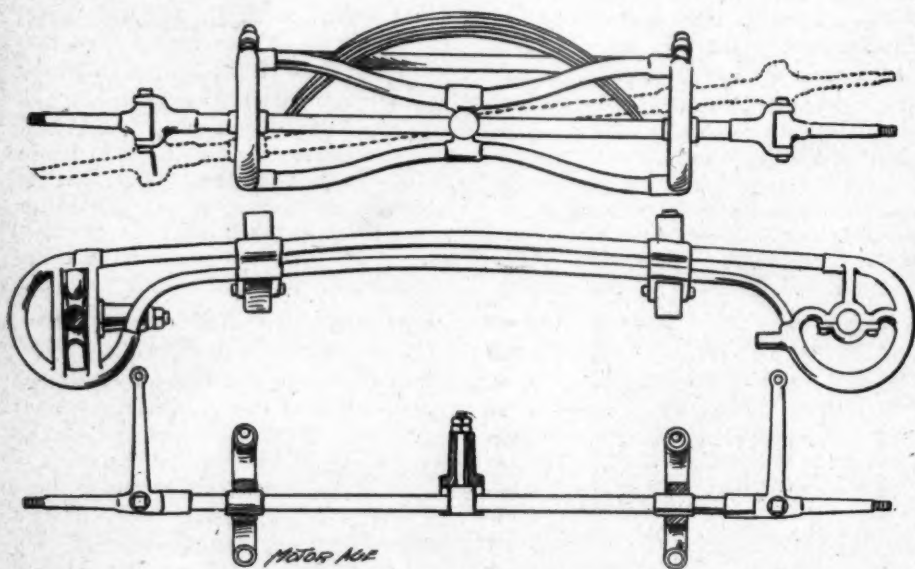
#### GROUTS' RUNNING GEAR

Letters patent No. 666,136, dated January 15, 1901, to Frederick E. and Charles B. Grout, of Orange, Mass.

The flexible frame employed in the

ther connected and braced by clips near the ends, to which are attached the extremities of the arch body springs.

The cross brace tubes of the front end of the frame are one above the other and between them in the center of the frame is a clip which forms a horizontal longitudinal bearing for the center pin of the front axle. This pin extends backwardly from the axle in the form of a bolt which is received by the seat and shank of the frame center piece. The axle is thus free to tilt vertically relative to the frame to compensate for irregular surfaces traversed by the vehicle wheels. In the circular loop at the front end of each double side



GROUT BROS.' RUNNING GEAR

steam carriage manufactured by Grout Bros. at Orange is the subject of this patent, and the frame is of the side-bar type with front and rear cross springs for the support of the vehicle body. The main frame consists of two side reaches, each comprising a pair of slightly arched tubes substantially parallel and joined at their ends to front and rear cast loops which afford circular termination. Suitable cross tubes at both ends of the reaches connect them and form a rigid rectangular frame.

The pair of tubes on each side are fur-

reach is a pair of upright bars or braces which form a vertical slide-way for the engaging end of the front axle. The axle is thus retained in its normal horizontal position in the frame, though it is at all time free to assume a limited vertical play.

Relative to last week's announcement that Hetty Green is about to purchase a speedy automobile, a Chicago paper naively remarks that this is the first indication that automobiles are selling in New York for less than a dollar apiece.



## "PLEASE DIVIDE YOUR PATENTS"

Chicago, Jan. 21.—Mr. Inventor, addressed through the Motor Age:—You may have invented a whole motor vehicle; you may have ransacked your noodle from cellar to garret for means and methods to make motors go, wheels turn, gears mesh, batteries generate, sparkers spark, brakes set, levers control, bodies contain and seats soft; you may have constructed (in your mind) a vehicle complete, every ounce and every item of it original and world-beating in its marvelous ingenuity; you may have created for the world agape the eighth wonder. Still all this is no reason that you should seek to get the entire bunch of pristine novelty covered by one patent with seventeen sheets of drawings, fourteen pages of specifications, 127 claims and reference letters running up into the thousands.

Simplicity, my friend, simplicity—that's the keynote of the invention business; and there is no reason on earth, or in the patent office, why it should not apply to patents. If you have invented a vehicle in which every part is new, you can get the machine patented as a whole with a long-winded description in which half of your schemes and brightest ideas are submerged as only a patent specification writer knows how to plunge things into the deep pond of verbosity. You can also divide your invention and by applying for several patents obtain better, clearer and more comprehensive claims for the various details of construction which are yours to have and to hold—if the patent examiner sees it that way.

If in your new carriage there is a novel running gear, a novel motor and a novel steering device, you will do a mechanical and commercial service to yourself by having three patent applications made: one for the running gear, one for the motor, and the third for the steering mechanism. By combining the three into one patent you save approximately two-thirds of the initial

expense, but you handicap the disposal of the patent if you wish to sell it, or risk its value if you wish to keep it for warning to others and protection for yourself.

The best example for the inexperienced inventor to follow is that of the experienced, and the best experienced are those who secure patents for articles of recognized utility and practicality—the manufacturers. The patents of large manufacturers are not patents for whole factories, histories of the entire workings of their brains, or accounts of the mammoth scope of their imaginations, but specific patents for elements of machine construction. A practical motor vehicle manufacturer does not apply for patents covering every feature of his machines. His inventions are divided into their natural mechanical factors. Divide yours. Then when you get a patent you will know what you have—unless you retained the services of a "shyster" patent attorney of the "no patent, no pay" variety.

Supposing a man should invent a new kind of nail and a new kind of brick, a new kind of shingle and a new kind of window latch—would he apply for a patent for a house, or would he seek patents on nails, bricks, shingles and window latches severally and respectively? Because, Mr. Inventor, you have builded an auto, you have no excuse for not patenting your motor as a motor, your brake as a brake, your frame as a frame and your battery as a battery. And yet you often aim to shoot a whole army of "objects" with one bullet. Last week a patent was issued for a motor vehicle. It was a small volume. The manifold objects of the invention were named as follows:

This invention relates to certain improvements in motor vehicles.

One of the objects of this invention is to provide an improved form of connection between the motor and the driven axle, the connection being of such a character as to be undisturbed by the vertical movements

and side swaying due to the spring-mounted body which carries the motor.

A further object of the invention is to improve the controlling means by which the several clutches which connect the different speed-gears to the shaft which they drive are operated.

A further object of the invention is to improve the controlling means for the igniting devices of hydrocarbon-motors, such as are employed with motor vehicles, so that the speed of the motor may be varied in order to vary the speed of the vehicle.

A further object of the invention is to provide a single means by which the throttle mechanism, the time of operation of the igniting devices, and the clutch mechanism or any two of them may be controlled and varied in unison.

A further object of the invention is to improve the steering mechanism of motor vehicles.

At least five inventions, and hence materials for at least five patents, are contained in the above abstract. From where came the reason or even the excuse for tying this bunch of beauties together with one ribbon?

Big patents, however, are characteristic of new manufacturing industries. The history of the bicycle trade and the patent records for the same show this. Early bicycle patents were voluminous and contained each from two to several thousand separate and distinct inventions. Because the bicycle

was a new machine it was re-designed from pedal to saddle, from foundation to flagstaff, every time it was tackled by an inspiring genius or an inspired idiot.

With the wearing off of novelty and the peregrinations of the bicycle into the common avenues of business and social life its mechanical development set a rapid pace, in the face of which inventors of the whole were replaced by inventors of parts. Now bicycle patents rarely cover more than a single item of cycle construction. It is therefore probable that when motor vehicles have had an existence of a few more years and the public begins to talk motors, steering gears, carbureters, armatures, batteries, boilers, engines, etc., instead of incessantly conversing about the relative value of the auto and the horse in life of different kinds, as well as in business, the small volumes that are now issued as patents will be superseded by rational letters patent, each covering a separate invention. But with the experience of the bicycle and other industries to stand upon, the natural evolution of the motor vehicle patent system can be hurried. Mr. Inventor, help a good thing along by dividing your patents. Respectfully,

L. G. A.

### *In a Personal Way*

James McDuffee, formerly of the Mobile company's Chicago store, will join William Metzger, of Detroit, who handles the Mobile in Michigan.

Rumor has it that the Mobile company has secured, as the head of its selling department, a man well known to the cycle trade and whose engagement is likely to cause some surprise.

J. Wesley Allison, president of the Woods Motor Vehicle Co., spent the greater part of last week in New York. Mr. Allison's motor vehicle affairs form only a part of his business, for he is

deeply interested in railroad matters also.

C. A. Halliday, of Oneida, N. Y., is a specialist in the manufacture of carriage tops, cushions, backs and seats. He does business with some of the carriage kings, and shows in his catalogue an up-to-date line of goods. His automobile sunshade is a thing of utility and beauty.

Mr. Fox, 151 Cady street, Rochester, has been experimenting for a long while with a steam motor of 4-horsepower which he says weighs in the neighborhood of sixty pounds. Mr. Fox informed the Motor Age man that the master mechanic of the Erie Railroad had investigated his engine and had expressed the opinion that the many features on it are

entirely new and that it will prove successful.

The Rochester Automobile Co., presided over by Joseph Mandery, has the most complete establishment of its kind in Rochester, and the business, which is conducted in several counties, has been quite satisfactory. With characteristic pluck Mr. Mandery went into the business for keeps, and the indications are that he will reap a well deserved award.

H. L. Hall, of the E. H. Hall Co., well known as dealers in sundries, has invented the Hall automatic dash for automobiles, and has applied for a patent thereon. In appearance it is like the ordinary dash on the horse-drawn vehicle, but it can be raised and lowered like a window blind. On a windy day with a hard head wind against the vehicle the dropping of the dash will mean a great reduction in wind resistance. Mr. Hall obtained his idea from a remark contained in a recent issue of Motor Age to the effect that makers of automobiles had not departed from carriage designs and had even used a dash which in view of the fact that there is no horse to throw mud or gravel, is superfluous. "I caught at that in a flash," said Mr. Hall, "and designed a steel frame with a leather covering, which by the operation of a spring can be raised or lowered. The dash is finished in black, maroon, green, or patent leather, and the frame work is of steel tubing, nickel, enamel, or leather covering, as desired. These devices are made to fit any automobile." The Hall company has been doing business for about five years, commenced with annual sales of about \$12,000, and last year did business exceeding \$125,000, a fine example of what may be accomplished by capable and energetic management.

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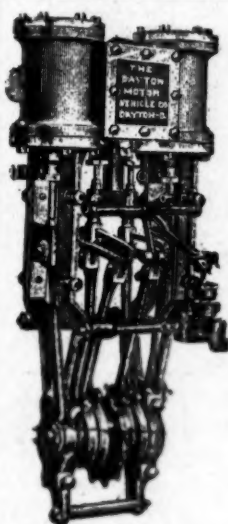


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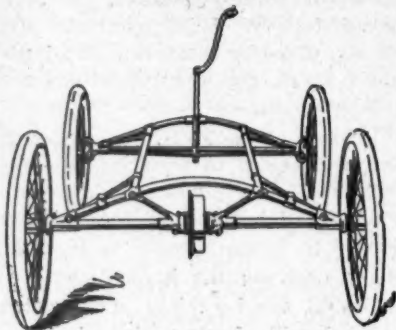
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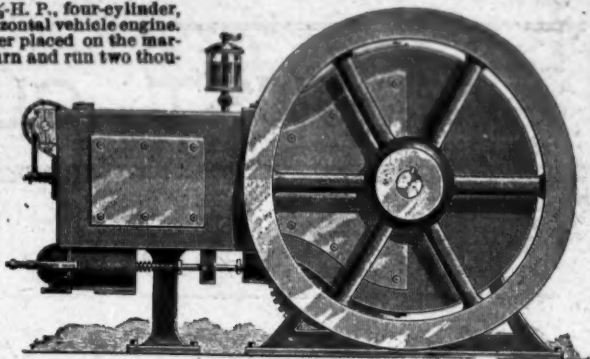
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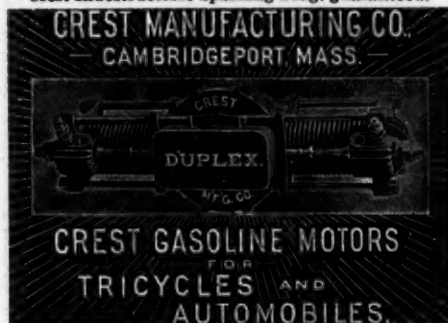
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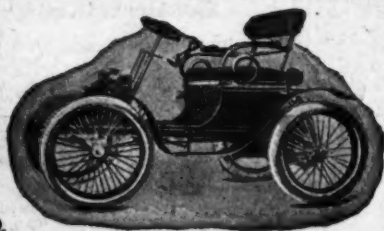
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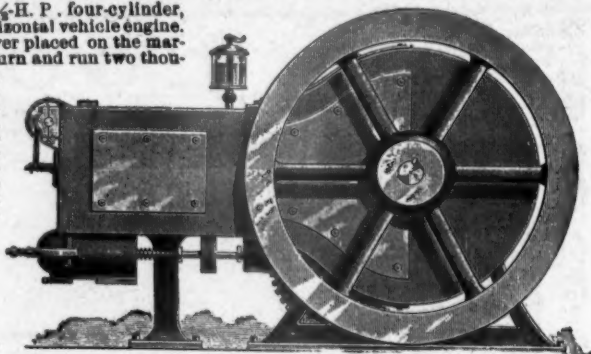
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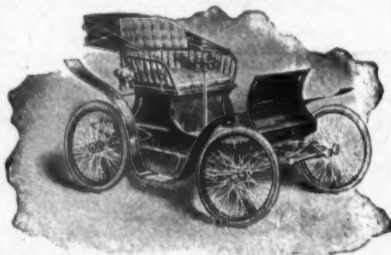
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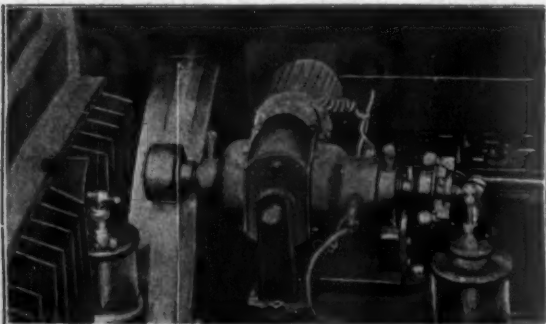


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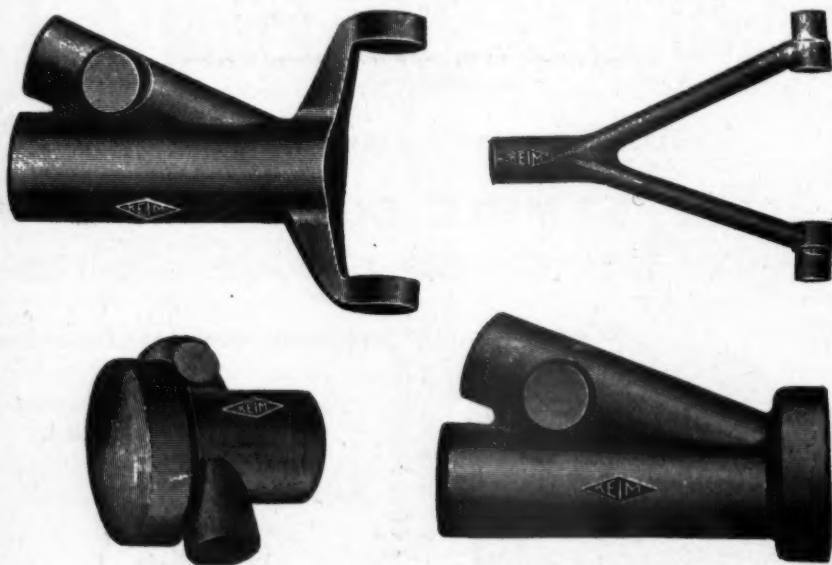
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